



FORM PTO - 1449

INFORMATION DISCLOSURE STATEMENT

ATTY DOCKET NO.: BSC-010C2

REC'D

APPLICANT: Crowley

SEP 25 2002

SERIAL NO.: 10/022,965

TECHNOLOGY CENTER P3700

FILING DATE: December 13, 2001

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	2,002,559	05/28/35	Wappler	174	39	04/18/29
	A2	2,583,937	01/29/52	Fessati	128	4	05/04/96
	A3	3,176,114	03/30/65	Kneisley	219	223	07/16/62
	A4	4,233,493	11/11/80	Nath	219	354	12/09/77
	A5	4,274,706	06/23/81	Tangonan	350	96.19	
	A6	4,289,966	09/15/81	Roberts	250	378	04/10/80
	A7	4,340,307	07/20/82	Diamond <i>et al.</i>	356	418	07/07/80
	A8	4,472,728	09/18/84	Grant <i>et al.</i>	357	30	02/19/82
	A9	4,541,272	09/17/85	Bause	73	118	05/13/83
	A10	4,548,505	10/22/85	Ono	356	445	04/19/82
	A11	4,556,057	12/3/85	Hiruma <i>et al.</i>			
	A12	4,570,638	2/18/86	Stoddart <i>et al.</i>			
	A13	4,578,061	03/25/86	Lemelson			
	A14	4,672,972	06/16/87	Berke	128	653	09/10/86
	A15	4,718,417	01/12/88	Kittrell <i>et al.</i>	128	303.1	03/22/85
	A16	4,803,992	02/14/89	Lemelson			
	A17	4,872,458	10/10/89	Kanshira <i>et al.</i>	128	401	09/08/87
	A18	4,882,623	11/21/89	Uchikubo	358	98	08/11/88
	A19	4,894,547	1/16/90	Leffell <i>et al.</i>			
	A20	4,902,896	02/20/90	Fertig Sr. <i>et al.</i>	290	348	05/08/87
	A21	4,928,172	05/22/90	Uehara <i>et al.</i>	358	98	09/15/88
	A22	4,930,516	06/05/90	Alfano <i>et al.</i>			
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U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A23	4,938,602	07/03/90	May <i>et al.</i>	356	435	03/27/89
	A24	4,981,138	01/01/91	Deckelbaum <i>et al.</i>	128	665	06/30/88
	A25	5,001,556	03/19/91	Nakamura <i>et al.</i>	358	98	03/22/90
	A26	5,009,655	04/23/91	Daignault, Jr. <i>et al.</i>	606	007	05/24/89
	A27	5,021,888	01/04/91	Knodou <i>et al.</i>	358	213.11	12/15/88
	A28	5,034,010	7/23/91	Kittrell <i>et al.</i>			
	A29	5,036,853	8/6/91	Jeffcoat <i>et al.</i>			
	A30	5,042,494	08/27/91	Alfano	128	665	12/04/89
	A31	5,045,056	09/03/91	Behl	604	49	09/15/89
	A32	5,056,503	10/15/91	Nagasaki <i>et al.</i>	128	6	02/28/91
	A33	5,062,428	11/5/91	Chance			
	A34	5,106,387	04/21/92	Kittrell <i>et al.</i>	606	15	
	A35	5,115,137	5/19/92	Andersson-Engels <i>et al.</i>			
	A36	5,116,759	05/26/92	Klainer <i>et al.</i>	435	288	06/27/90
	A37	5,125,404	6/30/92	Kittrell <i>et al.</i>			
	A38	5,127,407	07/07/92	Tan	128	633	
	A39	5,131,398	07/21/92	Alfano <i>et al.</i>	128	665	01/22/90
	A40	5,152,295	10/6/92	Kobayashi <i>et al.</i>			
	A41	5,166,755	11/24/92	Gat	356	419	05/23/90
	A42	5,172,693	12/22/92	Doody			
	A43	5,174,297	12/29/92	Daikuzono			
	A44	5,187,572	02/16/93	Nakamura <i>et al.</i>	358	98	10/30/91
	A45	5,187,672	2/16/92	Chance <i>et al.</i>			
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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A46	5,193,542	03/16/93	Missanelli et al.			
	A47	5,197,470	3/30/93	Helfer et al.			
	A48	5,199,431	4/6/93	Kittrell et al.			
	A49	5,201,318	4/13/93	Rava et al.			
	A50	5,206,174	04/27/93	Gehrke et al.	436	58	09/24/92
	A51	5,213,569	5/25/93	Davis	604	22	
	A52	5,233,621	08/03/93	Lawandy	372	22	10/09/92
	A53	5,242,437	09/07/93	Everette et al.	606	15	06/07/89
	A54	5,261,410	11/16/93	Alfano et al.			
	A55	5,262,645	11/16/93	Lambert et al.	250	339	09/03/91
	A56	5,280,788	1/25/94	Janes et al.			
	A57	5,304,173	4/19/94	Kittrell et al.	606	15	
	A58	5,305,748	4/26/94	Wilk			
	A59	5,309,907	05/10/94	Fang et al.	128	633	08/26/92
	A60	5,318,024	06/07/94	Kittrell et al.	128	634	
	A61	5,348,018	9/20/94	Alfano et al.			
	A62	5,350,375	9/27/94	Deckelbaum et al.	606	7	
	A63	5,351,532	10/04/94	Hager	73	153	10/08/92
	A64	5,377,676	01/03/95	Vari et al.	128	634	03/30/93
	A65	5,383,467	1/24/95	Auer et al.			
	A66	5,386,827	2/7/95	Chance et al.			
	A67	5,398,844	03/21/95	Zaslavsky et al.	221	208	
	A68	5,402,778	4/4/95	Chance			
	A69	5,402,792	04/04/95	Kimura	128	663.01	

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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A70	5,405,369	04/11/95	Selman <i>et al.</i>	607	88	01/25/94
	A71	5,413,108	5/9/95	Alfano			
	A72	5,417,207	05/23/95	Young <i>et al.</i>	128	634	12/06/93
	A73	5,419,323	5/30/95	Kittrell <i>et al.</i>			
	A74	5,421,337	6/6/95	Richards-Kortum <i>et al.</i>			
	A75	5,421,339	6/6/95	Ramanujam <i>et al.</i>			
	A76	5,445,608	08/29/95	Chen <i>et al.</i>	604	20	08/16/93
	A77	5,452,723	9/26/95	Wu <i>et al.</i>			
	A78	5,456,252	10/10/95	Vari <i>et al.</i>			
	A79	5,461,229	10/24/95	Sauter <i>et al.</i>	250	253	06/06/94
	A80	5,467,767	11/21/95	Alfano <i>et al.</i>	128	665	08/27/93
	A81	5,512,757	4/30/96	Cederstrand <i>et al.</i>			
	A82	5,517,313	5/14/96	Colvin, Jr.			
	A83	5,542,928	08/06/96	Evans <i>et al.</i>	604	113	06/27/94
	A84	5,545,897	8/13/96	Jack			
	A85	5,553,614	9/10/96	Chance			
	A86	5,555,885	9/17/96	Chance			
	A87	5,556,421	09/17/96	Prutchi <i>et al.</i>	607	36	
	A88	5,562,100	10/8/96	Kittrell <i>et al.</i>			
	A89	5,571,152	11/05/96	Chen <i>et al.</i>	607	92	05/26/95
	A90	5,579,773	12/3/96	Vo-Dinh <i>et al.</i>			
	A91	5,632,740	5/27/97	Koch <i>et al.</i>			
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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A92	5,647,368	07/15/97	Zeng et al.	128	665	
	A93	5,743,260	04/28/98	Chung et al.	128	633	
	A94	5,769,791	6/23/98	Benaron et al.			
	A95	5,785,658	7/28/98	Benaron et al.			
	A96	5,799,656	9/1/98	Alfano et al.			
	A97	5,807,261	9/15/98	Benaron et al.			

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRAC T ONLY	ENGLISH LANG Y/N
	B1	888727	07/08/49	DE					N
	B2	30 23 130	01/21/82	DE					N
	B3	40 05 743	08/29/91	DE					N
	B4	195 12 518	10/05/95	DE					N
	B5	0 314 937	10/07/88	EP					Y
	B6	0 304 321	09/03/92	EP				N	Y
	B7	0 629 380	12/21/94	EP					Y
	B8	0 650 694	05/03/95	EP				N	Y
	B9	0 728 440	08/28/96	EP				N	Y -Abstract
	B10	0 777 119	06/04/97	EP				N	Y- Abstract
	B11	0 792 618 A1	09/03/97	EP			01/31/97		Y
	B12	0 920 831	06/09/99	EP				N	Y
	B13	02-223828	09/06/90	JP			02/23/89		N
	B14	05-235327	04/04/95	JP			09/22/93		N

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FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG Y/N
	B15	07-88105	04/04/95	JP			09/22/93		N
	B16	07-289506	11/07/95	JP			04/22/94		N
	B17	08-83569	03/26/96	JP			09/09/94		N
	B18	9-192138	07/29/97	JP			01/16/96		Y
	B19	WO 90/04352	05/03/90	PCT			10/27/89		Y
	B20	WO 90/12536	11/01/90	PCT				N	Y
	B21	WO 91/15151	10/17/91	PCT					
	B22	WO 92/14514	09/03/92	PCT				N	Y
	B23	WO 92/15253	09/17/92	PCT					Y
	B24	WO 94/13191	06/23/94	PCT			12/09/93		Y
	B25	WO 95/12349	05/11/95	PCT				N	Y
	B26	WO 96/05693	02/22/96	PCT			08/09/95		Y
	B27	WO 96/07451	03/14/96	PCT					Y
	B28	WO 96/24406	08/15/96	PCT					Y
	B29	WO 96/39932	12/19/96	PCT				N	Y
	B30	WO 97/01985	23.01.97	PCT			03/07/95		Y
	B31	WO 98/22805	05/28/98	PCT				N	Y

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
	C1	Anidjar et al., "Ultraviolet Laser-Induced Autofluorescence Distinction Between Malignant and Normal Urothelial Cells and Tissues", <u>Journal of Biomedical Optics</u> , Vol. 1 No.3, pp. 335-341, 1996.
	C2	Coleman et al., "Acoustic Emission and Sonoluminescence Due to Cavitation at the Beam Focus of an Electrohydraulic Shock Wave Lithotripter", <u>Ultrasound in Med. Biol.</u> , Vol. 18, No. 3, pp. 267-281 (1992).

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INFORMATION DISCLOSURE STATEMENT		ATTY DOCKET NO.: BSC-010C2	RECEIVED SEP 25 2002
INFORM PTO - 1449		APPLICANT: Crowley	
		SERIAL NO.: 10/022,965	
		FILING DATE: December 13, 2000	TECHNOLOGY CENTER R3700
OTHER ART, JOURNAL ARTICLES, ETC.			
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)		
	C3	Cothren et al., "Gastrointestinal Tissue Diagnosis by Laser-Induced Fluorescence Spectroscopy at Endoscopy" <u>Gastro Endoscopy</u> , Vol. 36 No. 2, pp. 105-111, 1990.	
	C4	Crowley et al., "Ultrasound Guided Therapeutic Catheters: Recent Developments and Clinical Results", <u>The International Journal of Cardiac Imaging</u> , Vol. 6, pp. 145-156, 1991.	
	C5	http://iqe.ethz.ch/fpst/Final_Report/M4/M4PO4-1.html, July 25, 1996 - LESIT Final Report 1995, Module 4 Microsensor Technology (Baltes), Project 4.4: Integrated UV-Sensor by Bollinger, et al.	
	C6	Huang et al., "Fluorescence Diagnosis of Gynecological Cancerous and Normal Tissues", <u>SPIE</u> , Vol. 2135, pp. 42-44, 1994.	
	C7	Kapadia et al., "Laser-induced fluorescence spectroscopy of human colonic mucosa", <u>Gastroenterology</u> , Vol. 29, pp. 150-157, 1990.	
	C8	Ko, Biomedical Sensors and Actuators, Electronics Engineers' Handbook, McGraw-Hill 1989, pp 26-53 - 26-68.	
	C9	Kopp et al., "Stay Tuned: Photonic Filters Color Your World", <u>Photonics Spectra</u> , March 1997, pp. 125-129.	
	C10	Lilge et al., "Light Induced Fluorescence Spectroscopy at Endoscopy", <u>Presented at the 10th Asisan Pacific Congress of Gastroenterology</u> , 1996.	
	C11	Meindi, J. Implantable Telemetry in Biomedical Research, Electronics Engineers' Handbook, McGraw-Hill 1989, pp 26-41 - 25-53.	
	C12	Petrofsky, "In Vivo Measurement of Brain blood Flow in the Cat," <u>IEEE Transaction on Biomedical Engineering BME-26(8)</u> :441-445 (August, 1979).	
	C13	Vona et al., "A Test of the Hypothesis that Cavitation at the Focal Area of an Extracorporeal Shock Wave Lithotripter Produces Far Ultraviolet and Soft X-Ray Emissions", <u>J. Acoust. Soc. Am.</u> , Vol. 98 (2), pp. 706-711, (August 1995).	
EXAMINER		DATE CONSIDERED	

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#6/Bu
4/23/03

PATENT
Attorney Docket No. BSC-010C2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

SEP 25 2002

APPLICANT: Crowley CONFIRMATION NO.: 4630
SERIAL NO.: 10/022,965 GROUP NO.: 3737 TECHNOLOGY CENTER R3700
FILING DATE: December 13, 2001 EXAMINER: Not Yet Assigned
TITLE: Miniature Spectrometer

Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

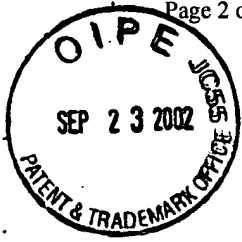
Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Copies of the patents and publications are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☒ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☐ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**
- ☐ the requisite fee under 37 C.F.R. 1.17(p), namely **\$180.00**, is included herein, or
- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, **AND**



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- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **\$180.00** is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:

- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Respectfully submitted,

Duan Wu

Attorney for Applicant(s)

Testa, Hurwitz, & Thibault, LLP

High Street Tower

125 High Street

Boston, Massachusetts 02110

Date: September 20, 2002
Reg. No. (Limited Recognition)

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